b) a plurality of electrodes on the proximal portion of the distal shaft section, having an interelectrode spacing of about 1 mm to not greater than 3 mm;

c) at least one temperature sensor on an exterior portion of the distal shaft section disposed between two adjacent electrodes;

d) an elongated core member in the distal shaft section.

37. The electrophysiology device of claim 36 wherein the distal portion of the distal shaft section is electrode free.

38. The electrophysiology device of claim 36 wherein the distal portion of the distal shaft section is formed at least in part of a helical coil.

39. The electrophysiology device of claim 38 wherein the helical coil is embedded in a polymeric material.

40. The electrophysiology device of claim 36 wherein the distal shaft section has a core member extending therein.

41. The electrophysiology device of claim 40 wherein the core member is formed of a material selected from the group consisting of stainless steel and NiTi alloy.

42. The electrophysiology device of claim 41 wherein the NiTi alloy exhibits superelasticity.

43. The electrophysiology device of claim 42 wherein the NiTi alloy has a stable austenite phase at body temperature.

44. The electrophysiology device of claim 43 wherein the NiTi alloy exhibits stress induced austenite-to-martensite phase transformation.

45. The electrophysiology device of claim 40 wherein the core member has a distal end secured to the coil in the distal portion thereof.

46. The electrophysiology device of claim 36 further including a plurality of electrode electrical conductors which are each electrically connected to an individual electrode at a distal end of the electrode electrical conductor and having a proximal end configured to connect to an electrical source.

47. The electrophysiology device of claim 36 wherein the shaft has an inner lumen and the elongated core member is disposed therein.

48. The device of claim 47 further including a jacket disposed about the core member.

49. The device of claim 46 having the electrode electrical conductors at least in part helically braided into the core member jacket.

50. The device of claim 46 having the electrode electrical conductors at least in part helically braided into the shaft.

51. The device of claim 36 further including a distal tip member secured to the distal end of the shaft.

52. The device of claim 51 wherein the distal tip member includes a coil member disposed about a distal extremity of the core member distal to the shaft.

53. The device of claim 36 wherein a metal band is disposed about the shaft over the temperature sensor.

54. The device of claim 53 wherein the metal band is soldered to the temperature sensor.

55. The device of claim 53 wherein a jacket is disposed about and in contact with the metal band, and defines an outer surface of the electrophysiology device.

56 The device of claim 54 wherein the jacket covers part of an adjacent electrode.

57. The device of claim 54 wherein the jacket covers part of both electrodes adjacent to the temperature sensor.

58. The device of claim 54 wherein the jacket covers a periphery of at least one of the two electrodes adjacent to the temperature sensor.

59. The device of claim 36 wherein at least some of the electrodes are sensing and ablation electrodes.

60. The device of claim 36 wherein the distal shaft section has a maximum outer dimension less than 1.65 mm.

61. An electrophysiology device, comprising:

a) an elongated shaft having a proximal end, a distal end, a distal shaft section with a proximal portion and a distal portion and a wall portion defining at least in part an inner lumen extending within the distal shaft section;

b) an elongated core member disposed within the inner lumen;

c) a plurality of electrodes on the proximal portion of the distal shaft section, having an interelectrode spacing of about 1 mm to not greater than 3 mm;

d) a plurality of electrical conductors which are at least partially embedded within a wall of the elongated shaft, and which have distal ends electrically connected to an electrode on the proximal shaft portion; and

e) at least one temperature sensor on an exterior portion of the distal shaft section disposed between two adjacent electrodes.

62. An electrophysiology device, comprising:

a) an elongated shaft having a proximal end, a distal end, a distal shaft section with a proximal portion and a distal portion and a wall portion defining at least in part an inner lumen extending within the distal shaft section;

b) a plurality of electrodes on the proximal portion of the distal shaft section, having an interelectrode spacing of about 1 mm to not greater than 3 mm;

c) at least one temperature sensor on an exterior portion of the distal shaft section disposed between two adjacent electrodes; and

d) at least one electrical conductor which is at least partially embedded within a wall of the elongated shaft, and which has a distal end electrically connected to the at least one temperature sensor on the proximal shaft portion.

63. An electrophysiology device, comprising:

a) an elongated shaft having a proximal end, a distal end, a distal shaft section with a proximal portion and a distal portion and a wall portion defining at least in part an inner lumen extending within the distal shaft section;

b) a plurality of partially covered electrodes on the proximal portion of the distal shaft section;

c) at least one temperature sensor on an exterior portion of the distal shaft section disposed between two adjacent electrodes;

d) at least one electrical conductor which has a distal end electrically connected to the at least one temperature sensor on the proximal shaft portion; and

e) a core member disposed in the distal shaft section.

64. The electrophysiology device of claim 48 wherein the core member is formed of a material selected from the group consisting of stainless steel and NiTi alloy.

65. The electrophysiology device of claim 64 wherein the NiTi alloy exhibits superelasticity.

66. The electrophysiology device of claim 65 wherein the NiTi alloy has a stable austenite phase at body temperature.

67. The electrophysiology device of claim 66 wherein the NiTi alloy exhibits stress induced austenite-to-martensite phase transformation.

68. A method for treating a patient, comprising:

a) the step of providing an electrophysiology device, comprising:

an elongated shaft having a proximal end, a distal end, and a distal shaft section, and a plurality of electrical conductors;

a plurality of electrodes on an exterior portion of the distal shaft section electrically connected to the electrical conductors, having an interelectrode spacing of not more than about 3 mm; and

a plurality of temperature sensors on an exterior portion of the distal shaft section, being positioned so that at least one temperature sensor is disposed between two adjacent electrodes, each temperature

sensor being electrically connected to at least one of the electrical conductors;

b) the step of introducing the device into the patient's vasculature and advancing the device until the distal section of the device is disposed at a desired location;

c) the step of positioning the device within a location of the patient's vasculature where one or more electrodes are in contact with a desired surface within the vasculature; and

d) the step of delivering high frequency electrical energy to the one or more electrodes in contact with the desired surface to ablate tissue; and

e) the step of detecting electrical activity with one or more of the electrodes after tissue ablation to determine the effectiveness of the tissue ablation.

69. The method of claim 53 wherein high frequency electrical energy is directed to the electrodes sequentially in a proximal direction.

70. An electrophysiology device for forming a continuous lesion in a patient's heart tissue, comprising:

a) an elongated shaft having a proximal end, a distal end, and a distal shaft section;

b) a plurality of partially covered electrodes on a proximal portion of the distal shaft section, with each electrode having a length of about 2 to about 8 mm and interelectrode spacing of about 1 mm to not greater than 3 mm;

c) at least one temperature sensor disposed between two adjacent electrodes;

d) one or more electrical conductors electrically connected to the at least one temperature sensor.

71. A method of treating a patient for cardiac arrhythmia by electrically isolating a first tissue region from a second tissue region, comprising:

a) providing an electrophysiology device having an elongated shaft which has a proximal end, a distal shaft section having a proximal portion with a plurality of electrodes and having a distal portion with a distal end:

b) positioning the proximal portion of the distal shaft section at a desired location between the first tissue region and the second tissue region; and

c) ablating a continuous lesion pattern between the first and second tissue regions with the electrodes on the proximal portion of the distal shaft section to electrically isolate the two tissue regions.

72. The method of claim 71 wherein an electrode is provided on the distal end of the distal portion of the distal shaft section.

73. An electrophysiology device for treating cardiac arrhythmia by electrically isolating a first tissue region from a second tissue region, comprising:

a) an elongated shaft having a proximal end, a distal end, and a distal shaft section with a proximal portion and a distal portion;

b) a plurality of electrodes on the proximal portion of the distal shaft section, having an interelectrode spacing not greater than 3 mm;

c) at least one temperature sensor on the distal shaft section disposed between two adjacent electrodes;